GenCore version 4.5

OM protein - protein search, using sw model

Run on: January 7, 2002, 15:40:12 ; Search time 154.28 Seconds
(without alignments)
26.407 Million cell updates/sec

Title: US-08-569-749-5
Perfect score: 307
Sequence: 1 CELYRMSTYSTFPAGVPVSE.....KVKCFCCGLMLDNWKLGDSP 55

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 522463 seqs, 74073290 residues

Total number of hits satisfying chosen parameters: 522463

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_1101:*
1: /SIDS2/gcgdata/geneseq/geneseqp/AA1980.DAT:*
2: /SIDS2/gcgdata/geneseq/geneseqp/AA1981.DAT:*
3: /SIDS2/gcgdata/geneseq/geneseqp/AA1982.DAT:*
4: /SIDS2/gcgdata/geneseq/geneseqp/AA1983.DAT:*
5: /SIDS2/gcgdata/geneseq/geneseqp/AA1984.DAT:*
6: /SIDS2/gcgdata/geneseq/geneseqp/AA1985.DAT:*
7: /SIDS2/gcgdata/geneseq/geneseqp/AA1986.DAT:*
8: /SIDS2/gcgdata/geneseq/geneseqp/AA1987.DAT:*
9: /SIDS2/gcgdata/geneseq/geneseqp/AA1988.DAT:*
10: /SIDS2/gcgdata/geneseq/geneseqp/AA1989.DAT:*
11: /SIDS2/gcgdata/geneseq/geneseqp/AA1990.DAT:*
12: /SIDS2/gcgdata/geneseq/geneseqp/AA1991.DAT:*
13: /SIDS2/gcgdata/geneseq/geneseqp/AA1992.DAT:*
14: /SIDS2/gcgdata/geneseq/geneseqp/AA1993.DAT:*
15: /SIDS2/gcgdata/geneseq/geneseqp/AA1994.DAT:*
16: /SIDS2/gcgdata/geneseq/geneseqp/AA1995.DAT:*
17: /SIDS2/gcgdata/geneseq/geneseqp/AA1996.DAT:*
18: /SIDS2/gcgdata/geneseq/geneseqp/AA1997.DAT:*
19: /SIDS2/gcgdata/geneseq/geneseqp/AA1998.DAT:*
20: /SIDS2/gcgdata/geneseq/geneseqp/AA1999.DAT:*
21: /SIDS2/gcgdata/geneseq/geneseqp/AA2000.DAT:*
22: /SIDS2/gcgdata/geneseq/geneseqp/AA2001.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	307	100.0	55	18	AAW13547	Human c-IAP1 repea
2	307	100.0	306	22	AAU02925	*Angiotensin conver*
3	307	100.0	618	18	AAW19746	Human inhibitor of
4	307	100.0	618	18	AAW19583	Human apoptosis in
5	307	100.0	618	18	AAW13545	Human c-IAP1. Hom
6	307	100.0	618	19	AAW69296	Human HIAP-2 prote
7	307	100.0	618	20	AAY33998	Human cellular inh
8	301	98.0	55	18	AAW13548	Human c-IAP2 repea
9	301	98.0	604	18	AAW19747	Human inhibitor of
10	301	98.0	604	18	AAW19582	Human apoptosis in
11	301	98.0	604	18	AAW13546	Human c-IAP2. Hom
12	301	98.0	604	19	AAW69295	Human HIAP-1 prote
13	301	98.0	604	20	AAY52703	Human cellular inh
14	301	98.0	604	20	AAY33997	Human cellular inh
15	301	98.0	1141	22	AAB50694	Human API2-MLT chi
16	291	94.8	591	18	AAW19586	Mouse apoptosis in
17	291	94.8	612	18	AAW13555	Murine c-IAP. Mus
18	291	94.8	612	19	AAW69299	Murine HIAP-2 prot
19	284	92.5	600	19	AAW69298	Murine HIAP-1 prot
20	284	92.5	602	18	AAW19585	Mouse apoptosis in
21	159	51.8	497	18	AAW19581	Human apoptosis in
22	159	51.8	497	19	AAW69294	Human XIAP protein
23	159	51.8	497	21	AAY99985	Human X-linked inh
24	159	51.8	497	21	AAY59451	Human XIAP protein
25	153	49.8	496	18	AAW19745	Mouse inhibitor of
26	153	49.8	496	18	AAW19584	Mouse apoptosis in
27	153	49.8	496	19	AAW69297	Murine XIAP protei
28	150	48.9	438	17	AAW04583	Human inhibitor of
29	129	42.0	438	22	AAB48191	Drosophila mutant
30	127	41.4	434	22	AAB48195	Drosophila mutant
31	127	41.4	438	22	AAB48188	Drosophila wild-ty
32	127	41.4	438	22	AAB48189	Drosophila mutant
33	127	41.4	438	22	AAB48190	Drosophila mutant
34	127	41.4	438	22	AAB48192	Drosophila mutant
35	127	41.4	438	22	AAB48193	Drosophila mutant
36	127	41.4	438	22	AAB48194	Drosophila mutant
37	127	41.4	438	22	AAB48196	Drosophila mutant
38	127	41.4	438	22	AAB48197	Drosophila mutant
39	125	40.7	1232	17	AAR98217	Neuronal apoptosis
40	125	40.7	1295	20	AAY14080	Gonadotropic hormo
41	125	40.7	1295	20	AAY09540	Human apoptosis in
42	125	40.7	1403	18	AAW20032	Neuronal apoptosis
43	125	40.7	1403	18	AAW20033	Neuronal apoptosis
44	125	40.7	1403	20	AAY14079	Gonadotropic hormo
45	125	40.7	1403	20	AAY09539	*Human apoptosis in*

ALIGNMENTS

RESULT 1
AAW13547
ID AAW13547 standard; Protein; 55 AA.
XX
AC AAW13547;
XX
DT 22-JUL-1997 (first entry)
XX
DE Human c-IAP1 repeat 1.
XX
KW IAP; inhibitor; apoptosis; RING finger domain; restinosis;
KW myocardial infarction; nephritis; HIV.
XX
OS Homo sapiens.
XX
PN WO9706182-A1.
XX
PD 20-FEB-1997.
XX
PF 06-AUG-1996; 96WO-US12860.
XX
PR 08-DEC-1995; 95US-0569749.
PR 08-AUG-1995; 95US-0512946.
XX
PA (TULA-) TULARIK INC.
XX
PI Goeddel DV, Rothe M;
XX
DR WPI; 1997-154209/14.
XX
PT Nucleic acids encoding cellular inhibitor of apoptosis proteins -
PT useful for apoptosis regulation in cells to reduce or increase
PT apoptosis and for pharmacological screening
XX

```
PS   Claim 3; Page 23; 35pp; English.
XX
CC   The human cellular inhibitor of apoptosis proteins (c-IAP1/2 -
CC   AAT61590/T61591) comprise a series of defined structural domain
CC   repeats and/or a RING finger domain; in particular, at least two of
CC   a first domain repeat (AAW13547 or AAW13548), a second domain repeat
CC   (AAW13549 or AAW13550), and a third domain repeat (AAW13551 or AAW13552)
CC   and/or a RING finger domain (AAW13553 or AAW13554), or a consensus
CC   sequences derived from these human genes.
CC   The nucleic acid is used for recombinant prodn. of human cellular
CC   inhibitor of apoptosis protein which modulates apoptosis
CC   regulation.  The nucleic acids are useful in therapies where
CC   increased cell-specific apoptosis is desired, e.g. in restinosis,
CC   inflammatory disease states, myocardial infarction, glomerular
CC   nephritis, transplant rejection and infectious diseases, e.g. HIV.
CC   They can also be used in conditions requiring a reduction in
CC   apoptosis.
XX
SQ   Sequence   55 AA;


  Query Match             100.0%;  Score 307;  DB 18;  Length 55;
  Best Local Similarity   100.0%;  Pred. No. 1e-35;
  Matches   55;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP 55
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1 celyrmstystfpagvpvserslaragfyytgvndkvkcfccglmldnwklgdsp 55


RESULT   2
AAU02925
ID   AAU02925 standard; Protein; 306 AA.
XX
AC   AAU02925;
XX
DT   12-SEP-2001  (first entry)
XX
DE   Angiotensin converting enzyme (ACEV) splice variant protein #25.
XX
KW   Angiotensin converting enzyme splice variant; ACEV; interleukin 6;
KW   granulocyte colony stimulating factor receptor; glucagon; hypertrophy;
KW   platelet-derived endothelial cell growth factor; cardiovascular disease;
KW   cellular tumour antigen P53; cyclin-dependent kinase inhibitor 1C;
KW   vasoactive intestinal polypeptide receptor 2; arteriosclerosis; cancer;
KW   myocardial infarction; coronary arterial thrombosis; renal disease;
KW   diabetic nephropathy; muscular disease; immune disorder; sarcoidosis;
KW   multiple sclerosis; immune complex nephritis; deep vein thrombosis;
KW   nonarcoidotic pulmonary granulomatous disease; endothelial abnormality;
KW   vascular disorder; asbestosis.
XX
OS   Homo sapiens.
XX
PN   WO200136632-A2.
XX
PD   25-MAY-2001.
XX
PF   17-NOV-2000; 2000WO-IL00766.
XX
PR   17-NOV-1999;   99IL-0132978.
PR   10-DEC-1999;   99IL-0133455.
XX
PA   (COMP-) COMPUGEN LTD.
XX
PI   Levine Z,  David A,  Azar I,  Khosravi R,  Bernstein J;
XX
DR   WPI; 2001-336004/35.
DR   N-PSDB; AAS06025.
XX
PT   Novel alternative splicing variants e.g. variant of angiotensin
PT   converting enzyme (ACEV), useful in identifying candidate compounds
PT   capable of binding to the variant and to detect anti-variant antibodies
PT   -
XX
PS   Claim 4; Fig 25; 519pp; English.
XX
CC   The sequence represents an angiotensin converting enzyme splice variant
CC   (ACEV) polypeptide. The polypeptides of the invention include variants of
CC   granulocyte colony stimulating factor receptor, glucagon, interleukin 6,
CC   platelet-derived endothelial cell growth factor, cyclin-dependent kinase
CC   inhibitor 1C, cellular tumour antigen P53, and vasoactive intestinal
CC   polypeptide receptor 2. The polypeptides and their associated nucleic
CC   acids are useful for identification of variant sequences and detection of
CC   candidate compounds capable of binding the molecules. The sequences of
CC   the invention can be used in the treatment and diagnosis of various
CC   disorders including cardiovascular diseases such as arteriosclerosis,
CC   myocardial infarction and coronary arterial thrombosis, renal diseases
CC   such as diabetic nephropathy, muscular diseases such as hypertrophy,
CC   immune disorders such as immune complex nephritis, multiple sclerosis,
CC   cancer, sarcoidosis, nonarcoidotic pulmonary granulomatous diseases such
CC   as asbestosis and vascular pathologies involving an endothelial
CC   abnormality such as deep vein thrombosis.
XX
SQ   Sequence   306 AA;


  Query Match             100.0%;  Score 307;  DB 22;  Length 306;
  Best Local Similarity   100.0%;  Pred. No. 7.5e-35;
  Matches   55;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP 55
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      45 celyrmstystfpagvpvserslaragfyytgvndkvkcfccglmldnwklgdsp 99


RESULT   3
AAW19746
ID   AAW19746 standard; Protein; 618 AA.
XX
AC   AAW19746;
XX
DT   16-SEP-1997  (first entry)
XX
DE   Human inhibitor of apoptosis protein homologue MIHB.
XX
KW   Inhibitor of apoptosis protein; IAP; mammalian IAP homologue; MIHB;
KW   degenerative disease; infectious disease; autoimmune disease;
KW   cancer; therapy; diagnosis.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Region          46..113
FT                   /label= BIR
FT   Region          184..250
FT                   /label= BIR
FT   Region          269..337
FT                   /label= BIR
FT   Region          569..606
FT                   /label= RING_finger
XX
PN   WO9723501-A1.
XX
PD   03-JUL-1997.
XX
PF   20-DEC-1996;   96WO-AU00827.
XX
PR   22-DEC-1995;   95AU-0007275.
XX
PA   (AMRA-) AMRAD OPERATIONS PTY LTD.
XX
PI   Vaux DL;
XX
DR   WPI; 1997-350966/32.
DR   N-PSDB; AAT72711.
XX
```

PT Isolated protein homologues of viral inhibitors of apoptosis - used
PT to modulate apoptosis for treatment of degenerative, infectious or
PT autoimmune diseases and cancer
XX
PS Claim 8; Page 51-54; 136pp; English.
XX
CC Mammalian IAP homologue B (MIHB) (AAW19746) is a human homologue of
CC baculovirus inhibitor of apoptosis protein (IAP). Its amino acid
CC sequence was deduced from a cDNA clone (see also AAT72711) isolated
CC from a human foetal liver cDNA library using primers based on
CC human EST sequences that resembled the BIR repeats of Orygia
CC pseudotsuguta polyhedrosis virus IAP. IAP homologues (see also
CC AAW19745 and AAW19747-52) and their derivatives and chemical analogues
CC can be used in methods for modulating apoptosis in animal cells,
CC specifically for treatment, by inhibition, of degenerative and
CC infectious disease or, by promotion, of cancer and autoimmune
CC disease.
XX
SQ Sequence 618 AA;

Query Match 100.0%; Score 307; DB 18; Length 618;
Best Local Similarity 100.0%; Pred. No. 1.7e-34;
Matches 55; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP 55
||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 45 celyrmstystfpagvpvserslaragfyytgvndkvkcfccglmldnwklgdsp 99

RESULT 4
AAW19583
ID AAW19583 standard; Protein; 618 AA.
XX
AC AAW19583;
XX
DT 02-SEP-1997 (first entry)
XX
DE Human apoptosis inhibitor HIAP-2.
XX
KW Apoptosis inhibitor; HIAP-2; HIV; AIDS; neurodegeneration;
KW myelodysplastic syndrome; ischaemia; myocardial infarction; stroke;
KW reperfusion injury; toxin-induced liver disease; gene therapy;
KW diagnosis.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT Domain 46..113
FT /label= BIR-1
FT Domain 184..250
FT /label= BIR-2
FT Domain 269..336
FT /label= BIR-3
FT Domain 560..605
FT /label= Ring_zinc_finger
XX
PN WO9706255-A2.
XX
PD 20-FEB-1997.
XX
PF 05-AUG-1996; 96WO-IB01022.
XX
PR 22-DEC-1995; 95US-0576956.
PR 04-AUG-1995; 95US-0511485.
XX
PA (UYOT-) UNIV OTTAWA.
XX
PI Baird S, Korneluk RG, Liston P, Mackenzie AE;
XX
DR WPI; 1997-154262/14.
DR N-PSDB; AAT70838.
XX
PT Nucleic acid encoding an inhibitor of apoptosis polypeptide - used
PT to inhibit apoptosis in e.g. HIV or AIDS patients, and for detection
PT of susceptibility to apoptotic disease
XX
PS Claim 27; Page 75-77; 219pp; English.
XX
CC Human XIAP, HIAP-1 and HIAP-2 and murine M-XIAP, M-HIAP-1 and
CC M-HIAP-2 (AAW19581-86) are a new class of mammalian proteins that
CC are inhibitors of apoptosis (IAP) and which are characterised by
CC the presence of a ring zinc finger domain (see also AAW19587) and at
CC least one BIR (baculovirus IAP repeat) domain (see also AAW19588).
CC The HIAP amino acid sequences were deduced from cDNA clones (AAT70837
CC and AAT70838) from a human liver library. IAP polypeptides can be
CC expressed in host cells (in vitro or in vivo) and used in methods
CC for treating diseases and disorders involving apoptosis, esp. in a
CC human diagnosed as HIV-positive or as having AIDS, a
CC neurodegenerative disease, a myelodysplastic syndrome or an
CC ischaemic injury, seleted from myocardial infarction, stroke,
CC reperfusion injury, or a toxin-induced liver disease.
XX
SQ Sequence 618 AA;

Query Match 100.0%; Score 307; DB 18; Length 618;
Best Local Similarity 100.0%; Pred. No. 1.7e-34;
Matches 55; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP 55
||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 45 celyrmstystfpagvpvserslaragfyytgvndkvkcfccglmldnwklgdsp 99

RESULT 5
AAW13545
ID AAW13545 standard; Protein; 618 AA.
XX
AC AAW13545;
XX
DT 22-JUL-1997 (first entry)
XX
DE Human c-IAP1.
XX
KW IAP; inhibitor; apoptosis; RING finger domain; restinosis;
KW myocardial infarction; nephritis; HIV.
XX
OS Homo sapiens.
XX
PN WO9706182-A1.
XX
PD 20-FEB-1997.
XX
PF 06-AUG-1996; 96WO-US12860.
XX
PR 08-DEC-1995; 95US-0569749.
PR 08-AUG-1995; 95US-0512946.
XX
PA (TULA-) TULARIK INC.
XX
PI Goeddel DV, Rothe M;
XX
DR WPI; 1997-154209/14.
DR N-PSDB; AAT61590.
XX
PT Nucleic acids encoding cellular inhibitor of apoptosis proteins -
PT useful for apoptosis regulation in cells to reduce or increase
PT apoptosis and for pharmacological screening
XX
PS Disclosure; Page 18-20; 35pp; English.
XX
CC The human cellular inhibitor of apoptosis proteins (c-IAP1/2 -
CC AAT61590/T61591) comprise a series of defined structural domain
CC repeats and/or a RING finger domain; in particular, at least two of
CC a first domain repeat (AAW13547 or AAW13548), a second domain repeat

CC (AAW13549 or AAW13550), and a third domain repeat (AAW13551 or AAW13552)
CC and/or a RING finger domain (AAW13553 or AAW13554), or a consensus
CC sequences derived from these human genes.
CC The nucleic acid is used for recombinant prodn. of human cellular
CC inhibitor of apoptosis protein which modulates apoptosis
CC regulation. The nucleic acids are useful in therapies where
CC increased cell-specific apoptosis is desired, e.g. in restinosis,
CC inflammatory disease states, myocardial infarction, glomerular
CC nephritis, transplant rejection and infectious diseases, e.g. HIV.
CC They can also be used in conditions requiring a reduction in
CC apoptosis.
XX
SQ Sequence 618 AA;

Query Match 100.0%; Score 307; DB 18; Length 618;
Best Local Similarity 100.0%; Pred. No. 1.7e-34;
Matches 55; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP 55
||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 45 celyrmstystfpagvpvserslaragfyytgvndkvkcfccglmldnwklgdsp 99

RESULT 6
AAW69296
ID AAW69296 standard; Protein; 618 AA.
XX
AC AAW69296;
XX
DT 13-NOV-1998 (first entry)
XX
DE Human HIAP-2 protein.
XX
KW Inhibitor of apoptosis protein; apoptosis enhancer; NAIP polypeptide;
KW proliferative disease; IAP; therapy; cancer; human; HIAP-2 protein.
XX
OS Homo sapiens.
XX
PN WO9835693-A2.
XX
PD 20-AUG-1998.
XX
PF 13-FEB-1998; 98WO-IB00781.
XX
PR 13-FEB-1997; 97US-0800929.
XX
PA (UYOT-) UNIV OTTAWA.
XX
PI Baird S, Korneluk R, Liston P, Mackenzie AE, Pratt C;
PI Tsang B;
XX
DR WPI; 1998-467164/40.
DR N-PSDB; AAV55040.
XX
PT Inducing apoptosis in proliferative mammalian cells with inhibitor
PT of IAP or NAIP polypeptide - also methods for prognosis based on
PT presence of IAP and NAIP, specifically applied to cancers involving
PT p53 mutations
XX
PS Disclosure; Fig 3; 147pp; English.
XX
CC This sequence is the human HIAP-2 protein, which is a inhibitor of
CC apoptosis protein (IAP), and can be used in the method of the invention.
CC The method is for enhancing apoptosis in cells from a mammal with
CC proliferative disease by treatment with a compound that inhibits
CC biological activity of an IAP or NAIP polypeptide. The inhibitory
CC compounds are used to treat proliferative diseases, specially cancers of
CC ovary, breast, pancreas, lymph nodes, skin, blood, lung, brain, kidney,
CC liver nasopharnyx, thyroid,central nervous system, prostate, colon,
CC rectum, cervix or endometrium, particularly to increase their sensitivity
CC to chemotherapeutic agents. High levels of the IAP or NAIP proteins are
CC detected in many cancers and are associated with poor prognosis,
CC resistance to chemotherapeutic agents and mutations in p53 (it is
CC suggested that wild-type p53 suppresses transcription of the IAP or NAIP
CC genes). Transgenic animals are used for testing the effects of antisense
CC oligonucleotides and for screening for the inhibitors.
XX
SQ Sequence 618 AA;

Query Match 100.0%; Score 307; DB 19; Length 618;
Best Local Similarity 100.0%; Pred. No. 1.7e-34;
Matches 55; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP 55
||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 45 celyrmstystfpagvpvserslaragfyytgvndkvkcfccglmldnwklgdsp 99

RESULT 7
AAY33998
ID AAY33998 standard; Protein; 618 AA.
XX
AC AAY33998;
XX
DT 26-NOV-1999 (first entry)
XX
DE Human cellular inhibitor of apoptosis-1 sequence.
XX
KW Cellular Inhibitor of Apoptosis-1; antisense; diagnostic; therapeutic;
KW c-IAP-1; prophylaxis; infection; inflammation; tumor formation.
XX
OS Homo sapiens.
XX
PN US5958772-A.
XX
PD 28-SEP-1999.
XX
PF 03-DEC-1998; 98US-0205204.
XX
PR 03-DEC-1998; 98US-0205204.
XX
PA (ISIS-) ISIS PHARM INC.
XX
PI Bennett CF, Cowsert LM, Ackermann EJ;
XX
DR WPI; 1999-561047/47.
DR N-PSDB; AAZ22143.
XX
PT Antisense compounds complementary to Cellular Inhibitor of Apoptosis-1
PT useful for e.g. diagnostics, therapeutics, and as research reagents -
XX
PS Example 13; Columns 41-46; 32pp; English.
XX
CC The invention provides antisense compounds of 8-30 nucleotides that
CC inhibit the expression of human Cellular Inhibitor of Apoptosis-1
CC (c-IAP-1). The antisense compounds may be used for diagnostics,
CC therapeutics (for modulating the expression of c-IAP-1), prophylaxis
CC (e.g. to prevent or delay infection, inflammation, or tumor formation),
CC as research reagents (e.g. to distinguish between members of a biological
CC pathway) and in kits. The present sequence represents the human cellular
CC inhibitor of apoptosis-1.
XX
SQ Sequence 618 AA;

Query Match 100.0%; Score 307; DB 20; Length 618;
Best Local Similarity 100.0%; Pred. No. 1.7e-34;
Matches 55; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP 55
||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 45 celyrmstystfpagvpvserslaragfyytgvndkvkcfccglmldnwklgdsp 99

```
RESULT   8
AAW13548
ID   AAW13548 standard; Protein; 55 AA.
XX
AC   AAW13548;
XX
DT   22-JUL-1997  (first entry)
XX
DE   Human c-IAP2 repeat 1.
XX
KW   IAP; inhibitor; apoptosis; RING finger domain; restinosis;
KW   myocardial infarction; nephritis; HIV.
XX
OS   Homo sapiens.
XX
PN   WO9706182-A1.
XX
PD   20-FEB-1997.
XX
PF   06-AUG-1996;   96WO-US12860.
XX
PR   08-DEC-1995;   95US-0569749.
PR   08-AUG-1995;   95US-0512946.
XX
PA   (TULA-) TULARIK INC.
XX
PI   Goeddel DV,  Rothe M;
XX
DR   WPI; 1997-154209/14.
XX
PT   Nucleic acids encoding cellular inhibitor of apoptosis proteins  -
PT   useful for apoptosis regulation in cells to reduce or increase
PT   apoptosis and for pharmacological screening
XX
PS   Claim 3; Page 24; 35pp; English.
XX
CC   The human cellular inhibitor of apoptosis proteins (c-IAP1/2 -
CC   AAT61590/T61591) comprise a series of defined structural domain
CC   repeats and/or a RING finger domain; in particular, at least two of
CC   a first domain repeat (AAW13547 or AAW13548), a second domain repeat
CC   (AAW13549 or AAW13550), and a third domain repeat (AAW13551 or AAW13552)
CC   and/or a RING finger domain (AAW13553 or AAW13554), or a consensus
CC   sequences derived from these human genes.
CC   The nucleic acid is used for recombinant prodn. of human cellular
CC   inhibitor of apoptosis protein which modulates apoptosis
CC   regulation.  The nucleic acids are useful in therapies where
CC   increased cell-specific apoptosis is desired, e.g. in restinosis,
CC   inflammatory disease states, myocardial infarction, glomerular
CC   nephritis, transplant rejection and infectious diseases, e.g. HIV.
CC   They can also be used in conditions requiring a reduction in
CC   apoptosis.
XX
SQ   Sequence   55 AA;


  Query Match             98.0%;  Score 301;  DB 18;  Length 55;
  Best Local Similarity   98.2%;  Pred. No. 6.9e-35;
  Matches   54;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy      1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP 55
          |||||||||||||||||||||||||||||||||||||||||||||||||||| ||||
Db      1 celyrmstystfpagvpvserslaragfyytgvndkvkcfccglmldnwkrgdsp 55


RESULT   9
AAW19747
ID   AAW19747 standard; Protein; 604 AA.
XX
AC   AAW19747;
XX
DT   16-SEP-1997  (first entry)
XX
DE   Human inhibitor of apoptosis protein homologue MIHC.
XX
KW   Inhibitor of apoptosis protein; IAP; mammalian IAP homologue; MIHC;
KW   degenerative disease; infectious disease; autoimmune disease;
KW   cancer; therapy; diagnosis.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Region          29..97
FT                   /label= BIR
FT   Region          169..236
FT                   /label= BIR
FT   Region          255..323
FT                   /label= BIR
FT   Region          556..593
FT                   /label= RING_finger
XX
PN   WO9723501-A1.
XX
PD   03-JUL-1997.
XX
PF   20-DEC-1996;   96WO-AU00827.
XX
PR   22-DEC-1995;   95AU-0007275.
XX
PA   (AMRA-) AMRAD OPERATIONS PTY LTD.
XX
PI   Vaux DL;
XX
DR   WPI; 1997-350966/32.
DR   N-PSDB; AAT72712.
XX
PT   Isolated protein homologues of viral inhibitors of apoptosis - used
PT   to modulate apoptosis for treatment of degenerative, infectious or
PT   autoimmune diseases and cancer
XX
PS   Claim 9; Page 58-62; 136pp; English.
XX
CC   Mammalian IAP homologue C (MIHC) (AAW19747) is a human homologue of
CC   baculovirus inhibitor of apoptosis protein (IAP).  Its amino acid
CC   sequence was deduced from a cDNA clone (see also AAT72712) isolated
CC   from a human foetal liver cDNA library using primers based on
CC   human EST sequences that resembled the BIR repeats of Orygia
CC   pseudotsuguta polyhedrosis virus IAP.  IAP homologues (see also
CC   AAW19745-46 and AAW19748-52) and their derivatives and chemical
CC   analogues can be used in methods for modulating apoptosis in animal
CC   cells, specifically for treatment, by inhibition, of degenerative
CC   and infectious disease or, by promotion, of cancer and autoimmune
CC   disease.
XX
SQ   Sequence   604 AA;


  Query Match             98.0%;  Score 301;  DB 18;  Length 604;
  Best Local Similarity   98.2%;  Pred. No. 1.2e-33;
  Matches   54;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy      1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP 55
          |||||||||||||||||||||||||||||||||||||||||||||||||||| ||||
Db     28 celyrmstystfpagvpvserslaragfyytgvndkvkcfccglmldnwkrgdsp 82


RESULT  10
AAW19582
ID   AAW19582 standard; Protein; 604 AA.
XX
AC   AAW19582;
XX
DT   02-SEP-1997  (first entry)
XX
DE   Human apoptosis inhibitor HIAP-1.
XX
KW   Apoptosis inhibitor; HIAP-1; HIV; AIDS; neurodegeneration;
```

```
KW   myelodysplastic syndrome; ischaemia; myocardial infarction; stroke;
KW   reperfusion injury; toxin-induced liver disease; gene therapy;
KW   diagnosis.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Domain          29..96
FT                   /label= BIR-1
FT   Domain          169..235
FT                   /label= BIR-2
FT   Domain          255..322
FT                   /label= BIR-3
FT   Domain          546..591
FT                   /label= Ring_zinc_finger
XX
PN   WO9706255-A2.
XX
PD   20-FEB-1997.
XX
PF   05-AUG-1996;   96WO-IB01022.
XX
PR   22-DEC-1995;   95US-0576956.
PR   04-AUG-1995;   95US-0511485.
XX
PA   (UYOT-) UNIV OTTAWA.
XX
PI   Baird S,  Korneluk RG,  Liston P,  Mackenzie AE;
XX
DR   WPI; 1997-154262/14.
DR   N-PSDB; AAT70837.
XX
PT   Nucleic acid encoding an inhibitor of apoptosis polypeptide - used
PT   to inhibit apoptosis in e.g. HIV or AIDS patients, and for detection
PT   of susceptibility to apoptotic disease
XX
PS   Claim 27; Page 72-74; 219pp; English.
XX
CC   Human XIAP, HIAP-1 and HIAP-2 and murine M-XIAP, M-HIAP-1 and
CC   M-HIAP-2 (AAW19581-86) are a new class of mammalian proteins that
CC   are inhibitors of apoptosis (IAP) and which are characterised by
CC   the presence of a ring zinc finger domain (see also AAW19587) and at
CC   least one BIR (baculovirus IAP repeat) domain (see also AAW19588).
CC   The HIAP amino acid sequences were deduced from cDNA clones (AAT70837
CC   and AAT70838) from a human liver library.  IAP polypeptides can be
CC   expressed in host cells (in vitro or in vivo) and used in methods
CC   for treating diseases and disorders involving apoptosis, esp. in a
CC   human diagnosed as HIV-positive or as having AIDS, a
CC   neurodegenerative disease, a myelodysplastic syndrome or an
CC   ischaemic injury, seleted from myocardial infarction, stroke,
CC   reperfusion injury, or a toxin-induced liver disease.
XX
SQ   Sequence   604 AA;


  Query Match             98.0%;  Score 301;  DB 18;  Length 604;
  Best Local Similarity   98.2%;  Pred. No. 1.2e-33;
  Matches   54;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP 55
           ||||||||||||||||||||||||||||||||||||||||||||||||||| ||||
Db      28 celyrmstystfpagvpvserslaragfyytgvndkvkcfccglmldnwkrgdsp 82


RESULT  11
AAW13546
ID   AAW13546 standard; Protein; 604 AA.
XX
AC   AAW13546;
XX
DT   22-JUL-1997  (first entry)
XX
DE   Human c-IAP2.
XX
KW   IAP; inhibitor; apoptosis; RING finger domain; restinosis;
KW   myocardial infarction; nephritis; HIV.
XX
OS   Homo sapiens.
XX
PN   WO9706182-A1.
XX
PD   20-FEB-1997.
XX
PF   06-AUG-1996;   96WO-US12860.
XX
PR   08-DEC-1995;   95US-0569749.
PR   08-AUG-1995;   95US-0512946.
XX
PA   (TULA-) TULARIK INC.
XX
PI   Goeddel DV,  Rothe M;
XX
DR   WPI; 1997-154209/14.
DR   N-PSDB; AAT61591.
XX
PT   Nucleic acids encoding cellular inhibitor of apoptosis proteins  -
PT   useful for apoptosis regulation in cells to reduce or increase
PT   apoptosis and for pharmacological screening
XX
PS   Disclosure; Page 21-23; 35pp; English.
XX
CC   The human cellular inhibitor of apoptosis proteins (c-IAP1/2 -
CC   AAT61590/T61591) comprise a series of defined structural domain
CC   repeats and/or a RING finger domain; in particular, at least two of
CC   a first domain repeat (AAW13547 or AAW13548), a second domain repeat
CC   (AAW13549 or AAW13550), and a third domain repeat (AAW13551 or AAW13552)
CC   and/or a RING finger domain (AAW13553 or AAW13554), or a consensus
CC   sequences derived from these human genes.
CC   The nucleic acid is used for recombinant prodn. of human cellular
CC   inhibitor of apoptosis protein which modulates apoptosis
CC   regulation.. The nucleic acids are useful in therapies where
CC   increased cell-specific apoptosis is desired, e.g. in restinosis,
CC   inflammatory disease states, myocardial infarction, glomerular
CC   nephritis, transplant rejection and infectious diseases, e.g. HIV.
CC   They can also be used in conditions requiring a reduction in
CC   apoptosis.
XX
SQ   Sequence   604 AA;


  Query Match             98.0%;  Score 301;  DB 18;  Length 604;
  Best Local Similarity   98.2%;  Pred. No. 1.2e-33;
  Matches   54;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP 55
           ||||||||||||||||||||||||||||||||||||||||||||||||||| ||||
Db      28 celyrmstystfpagvpvserslaragfyytgvndkvkcfccglmldnwkrgdsp 82


RESULT  12
AAW69295
ID   AAW69295 standard; Protein; 604 AA.
XX
AC   AAW69295;
XX
DT   13-NOV-1998  (first entry)
XX
DE   Human HIAP-1 protein.
XX
KW   Inhibitor of apoptosis protein; apoptosis enhancer; NAIP polypeptide;
KW   proliferative disease; IAP; therapy; cancer; human; HIAP-1 protein.
XX
OS   Homo sapiens.
XX
PN   WO9835693-A2.
XX
```

PD 20-AUG-1998.
XX
PF 13-FEB-1998; 98WO-IB00781.
XX
PR 13-FEB-1997; 97US-0800929.
XX
PA (UYOT-) UNIV OTTAWA.
XX
PI Baird S, Korneluk R, Liston P, Mackenzie AE, Pratt C;
PI Tsang B;
XX
DR WPI; 1998-467164/40.
DR N-PSDB; AAV55039.
XX
PT Inducing apoptosis in proliferative mammalian cells with inhibitor
PT of IAP or NAIP polypeptide - also methods for prognosis based on
PT presence of IAP and NAIP, specifically applied to cancers involving
PT p53 mutations
XX
PS Disclosure; Fig 2; 147pp; English.
XX
CC This sequence is the human HIAP-1 protein, which is a inhibitor of
CC apoptosis protein (IAP), and can be used in the method of the invention.
CC The method is for enhancing apoptosis in cells from a mammal with
CC proliferative disease by treatment with a compound that inhibits
CC biological activity of an IAP or NAIP polypeptide. The inhibitory
CC compounds are used to treat proliferative diseases, specially cancers of
CC ovary, breast, pancreas, lymph nodes, skin, blood, lung, brain, kidney,
CC liver nasopharnyx, thyroid,central nervous system, prostate, colon,
CC rectum, cervix or endometrium, particularly to increase their sensitivity
CC to chemotherapeutic agents. High levels of the IAP or NAIP proteins are
CC detected in many cancers and are associated with poor prognosis,
CC resistance to chemotherapeutic agents and mutations in p53 (it is
CC suggested that wild-type p53 suppresses transcription of the IAP or NAIP
CC genes). Transgenic animals are used for testing the effects of antisense
CC oligonucleotides and for screening for the inhibitors.
XX
SQ Sequence 604 AA;

Query Match 98.0%; Score 301; DB 19; Length 604;
Best Local Similarity 98.2%; Pred. No. 1.2e-33;
Matches 54; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP 55
||||||||||||||||||||||||||||||||||||||||||||||||||||| ||||
Db 28 celyrmstystfpagvpvserslaragfyytgvndkvkcfccglmldnwkrgdsp 82

RESULT 13
AAY52703
ID AAY52703 standard; Protein; 604 AA.
XX
AC AAY52703;
XX
DT 26-JAN-2000 (first entry)
XX
DE Human cellular inhibitor of apoptosis-2 protein.
XX
KW Identification; genetic target; gene modulation; human;
KW antisense oligonucleotide; phosphorothioate; target validation;
KW nucleotide sequence-based technology; antisense drug discovery.
XX
OS Homo sapiens.
XX
PN WO9953101-A1.
XX
PD 21-OCT-1999.
XX
PF 13-APR-1999; 99WO-US08268.
XX
PR 13-APR-1998; 98US-0081483.
PR 28-APR-1998; 98US-0067638.
XX
PA (ISIS-) ISIS PHARM INC.
XX
PI Cowsert LM, Baker BF, McNeil J, Freier SM, Sasmor HM, Brooks DG;
PI Ohasi C, Wyatt JR, Borchers AH, Vickers TA;
XX
DR WPI; 1999-620446/53.
DR N-PSDB; AAZ41005.
XX
PT Identifying compounds which modulate expression of nucleic acids, used
PT to provide compounds having defined physical, chemical or bioactive
PT properties, e.g. antisense activity -
XX
PS Example 20; Page 197-202; 264pp; English.
XX
CC A method has been developed of defining a set of compounds that modulate
CC the expression of a target nucleic acid (tNA) sequence via binding of
CC the compounds with the tNA sequence. The method comprises generating a
CC library of virtual compounds in silico according to defined criteria,
CC and evaluating in silico the binding of the virtual compounds with the
CC tNA according to defined criteria. Also described are: (1) a method of
CC defining a set of oligonucleotides (ONs) that modulate the expression of
CC a tNA sequence via binding of the ONs with the tNA sequence comprising
CC generating a library of virtual compounds in silico according to defined
CC criteria, and evaluating in silico the binding of the virtual ONs with
CC the tNA according to defined criteria; and (2) a method of defining a
CC set of compounds that modulate the expression of a tNA sequence via
CC binding of the compounds with the tNA. The methods can be used for the
CC generation and identification of synthetic compounds having defined
CC physical, chemical or bioactive properties. Information gathered from
CC assays of such compounds is used to identify nucleic acid sequences that
CC are tractable to a variety of nucleotide sequence-based technologies,
CC e.g. antisense drug discovery and target validation. AAZ40852 to
CC AAZ41220, and AAY52701 to AAY52706, represent sequences used in the
CC exemplification of the present invention.
XX
SQ Sequence 604 AA;

Query Match 98.0%; Score 301; DB 20; Length 604;
Best Local Similarity 98.2%; Pred. No. 1.2e-33;
Matches 54; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP 55
||||||||||||||||||||||||||||||||||||||||||||||||||||| ||||
Db 28 celyrmstystfpagvpvserslaragfyytgvndkvkcfccglmldnwkrgdsp 82

RESULT 14
AAY33997
ID AAY33997 standard; Protein; 604 AA.
XX
AC AAY33997;
XX
DT 26-NOV-1999 (first entry)
XX
DE Human cellular inhibitor of apoptosis-2 sequence.
XX
KW Cellular Inhibitor of Apoptosis-2; antisense; diagnostic; therapeutic;
KW c-IAP-2; prophylaxis; infection; inflammation; tumor formation.
XX
OS Homo sapiens.
XX
PN US5958771-A.
XX
PD 28-SEP-1999.
XX
PF 03-DEC-1998; 98US-0205144.
XX
PR 03-DEC-1998; 98US-0205144.
XX
PA (ISIS-) ISIS PHARM INC.
XX

PI Bennett CF, Cowsert LM, Ackermann EJ;
XX
DR WPI; 1999-561046/47.
DR N-PSDB; AAZ22096.
XX
PT Antisense compounds complementary to Cellular Inhibitor of Apoptosis-2
PT useful for e.g. diagnostics, therapeutics, and as research reagents -
XX
PS Example 13; Columns 45-50; 33pp; English.
XX
CC The invention provides antisense compounds of 8-30 nucleotides that
CC inhibit the expression of human Cellular Inhibitor of Apoptosis-2
CC (c-IAP-2). The antisense compounds may be used for diagnostics,
CC therapeutics (for modulating the expression of c-IAP-2), prophylaxis
CC (e.g. to prevent or delay infection, inflammation, or tumor formation),
CC as research reagents (e.g. to distinguish between members of a biological
CC pathway) and in kits. The present sequence represents the human cellular
CC inhibitor of apoptosis-2.
XX
SQ Sequence 604 AA;

Query Match 98.0%; Score 301; DB 20; Length 604;
Best Local Similarity 98.2%; Pred. No. 1.2e-33;
Matches 54; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP 55
||||||||||||||||||||||||||||||||||||||||||||||||||||| ||||
Db 28 celyrmstystfpagvpvserslaragfyytgvndkvkcfccglmldnwkrgdsp 82

RESULT 15
AAB50694
ID AAB50694 standard; Protein; 1141 AA.
XX
AC AAB50694;
XX
DT 19-MAR-2001 (first entry)
XX
DE Human API2-MLT chimeric protein sequence.
XX
KW Human; API2-MLT chimera; chimeric; apoptosis inhibitor 2; MLT; API2;
KW mucosa-associated lymphoid tissue lymphoma associated translocation;
KW chromosome 11 region q21-22.3; chromosome 18 region q21.1-22;
KW molecular characterisation; chromosome translocation; carcinogenesis;
KW fusion protein; malignancy.
XX
OS Chimeric - Homo sapiens.
OS Synthetic.
XX
PN WO200073500-A1.
XX
PD 07-DEC-2000.
XX
PF 26-MAY-2000; 2000WO-EP04796.
XX
PR 27-MAY-1999; 99EP-0201683.
XX
PA (VLAA-) VLAAMS INTERUNIVERSITAIR INST BIOTECHNOG.
XX
PI Baens M, Marynen P, Dierlamm J;
XX
DR WPI; 2001-061556/07.
DR N-PSDB; AAC90972.
XX
PT Determining if a tissue sample has a chromosome (11:18) translocation
PT associated with malignancies by amplifying a nucleic acid sample using
PT primers complementary to chromosome 11 region q21-22.3 and chromosome
PT 18 region q21.1-22 -
XX
PS Claim 12; Fig 5; 47pp; English.
XX
CC The present invention describes a method for determining if a tissue
CC sample comprises a cell with a chromosome (11:18) translocation
CC associated with malignancies such as mucosa-associated lymphoid tissue
CC (MALT) lymphomas. The method comprises subjecting a sample nucleic acid
CC to amplification using primers complementary to sequences which are on
CC chromosome 11 region q21-22.3 and on chromosome 18 region q21.1-22. The
CC method can be used for determining if a tissue sample or analogue
CC comprises a chromosome (11:18) translocation associated with malignancies
CC such as mucosa-associated lymphoid tissue lymphomas. The nucleic acid or
CC the antibody may be used as a probe for detection, for hybridisation to
CC southern blot cell DNAs or for in situ hybridisation of cells, or for
CC determining the presence of complementary DNA. The present sequence
CC represents the specifically claimed chimeric human apoptosis inhibitor 2
CC (API2)/MALT-lymphoma associated translocation (MLT) protein.
XX
SQ Sequence 1141 AA;

Query Match 98.0%; Score 301; DB 22; Length 1141;
Best Local Similarity 98.2%; Pred. No. 2.5e-33;
Matches 54; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP 55
||||||||||||||||||||||||||||||||||||||||||||||||||||| ||||
Db 28 celyrmstystfpagvpvserslaragfyytgvndkvkcfccglmldnwkrgdsp 82

Search completed: January 7, 2002, 15:40:13
Job time: 172 sec